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ECONOMY IN HOSPITAL WORK

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IN view of the fact that there exists at the present time in many of our hospitals the urgent need of a larger income with which to meet the constantly increasing cost of their maintenance, the question of economy becomes an all-important one—economy in its highest sense, what it means and how it may be observed most advantageously in hospital work.

Ruskin says, "Economy no more means *saving* than it means *spending* money; it means the administration of a house; its stewardship, spending or saving, whether money or time or anything else, to the best possible advantage." Let us add, it is also the result of education and intelligence.

In the exercise of economy two important facts may be taken into consideration: first, the tendency to extravagance, seen everywhere and among all classes, and ever characteristic of city life. In the subject particularly in question, this extravagance is most apparent in the profuse expenditure of money on costly construction, elaborate interiors, with lavish and expensive equipment. Little thought, it would seem, is given to ways and means of maintaining these institutions and for future provision to carry on their constantly increasing work.

The second consideration is, the prevention of waste, as a duty.

This tendency to extravagance when pertaining to hospital work, how easily the habit may be formed, how unconsciously one may drift into unnecessary use of supplies of every description and in every department, and how surprised when statistics, carefully kept, show the decrease that may be brought about through investigation and supervision; and this without any change in the activity of the service or less care and comfort for the patients.

There are so many channels for waste, so many sources of leaks, so many ignorant of the cost of equipment and of supplies, and, not infrequently, we regret to say, so many indifferent to the wise observance of a true economic spirit, that, not unnaturally, the questions of economy and efficiency will fail to go hand-in-hand.

For obvious reasons it is very difficult to make comparisons; as yet there exists no uniform method of keeping hospital accounts or of compiling annual statistics. We find one institution itemizing in its

report on annual expenditure even to pins and needles; while another includes these and a score of other necessities under the heading "dry goods," and giving the total cost in thousands of dollars. In a well-known hospital, whose expenditure recently underwent thorough investigation and reorganization, it was found that in safety-pins alone two hundred dollars had been saved in one year. This result was, however, not altogether a matter for congratulation when it became known that another institution of about the same capacity and doing similar work had never spent this amount for the articles in question.

Economy, however, as practised in one institution might be considered parsimony in another, and nowhere, perhaps, is the virtue more difficult to inculcate than in a hospital ward, where exists such a constant demand for so much that goes towards making or marring the comfort and well-being of the patient, the pleasure of the work and the need for criticism, be it favorable or otherwise, on the part of those in authority.

Three general divisions can be made in considering hospital economy—viz., the purchase, distribution, and use of equipment and supplies. The first responsibility is generally—and, we will say, rightly—placed with the superintendent of the hospital, who will either purchase directly, or, in large institutions, authorize competent heads of departments to select material or equipment as may seem to their experienced judgment to best meet the requirements. Some corporations delegate the duty to a comptroller, purchasing agent, or steward, and in smaller institutions there may be a Purchasing Committee. As it has so often been proved that the best is the cheapest (ultimately), the importance of much experience and foresight, with a knowledge of quantities as well as quality, or of the particular use of the article specified, goes without saying. Full information should always be had, if possible, as to market conditions, and there must always be borne in mind the two-fold duty of keeping down current expenses while doing good work in supplying legitimate needs.

While provision must always be made for emergencies, it is sometimes a wise policy that necessitates, occasionally, a cutting down in quantities issued, thereby compelling more careful handling of the same until the stock be renewed.

We find various systems in regard to the distributing and issuing of supplies and responsibility divided much more in some institutions than in others. The steward's store-room in one large hospital is not unlike a country store, minus, perhaps, the soothing syrup or the pain-killer, but supplying all other needs of a large institution. Generally, the store-room issues all household supplies, utensils, dishes, while the linen-room is the headquarters for bedding, blankets, towels, gowns, etc., as

well as the making of special garments for household, ward, or operating-room use. Sometimes we find rubber goods, such as sheeting, hot-water bags, ice-caps, given out and accounted for by the head of this same department, and, again, such articles are considered as medical or surgical supplies, and, together with gauze and cotton, issued by the drug department.

It matters little, however, in what part of the building or under whose special control these various supplies are held; the main object should be a systematic issuing of and an accurate accounting for the same, these accounts being kept so correctly that monthly or yearly comparisons may be made and an intimate knowledge thus obtained of their wise and careful distribution.

Many hospitals have a system of exchange, whereby household articles, linen, rubber goods, etc., are, when worn out or unfit for use, repaired or replaced by new, thus keeping up the stock and at the same time accounting for previous issues. This system seems a very satisfactory one; it should, however, be *strictly* adhered to, and not known better in the breach than in the observance.

Breakages are sometimes provided for, at least in the nursing department, by a deposit of money, made on entrance, to cover loss or damage incurred in this manner, and it would seem a very practical way of handling the question of "carelessness" and at the same time impressing on the pupils a fact, of which they so frequently appear wofully ignorant—viz., that hospital property costs money.

And this brings us to what may be, possibly, one of the most important points in the question under consideration, because offering the most frequent opportunities for the observance of economy, as well as indifference to waste—viz., the utilization of hospital material in the broadest meaning of the term, from the daily or weekly consumption of coal or potatoes to the annual supply of matches.

One of the most common channels for waste and opportunities for economy is in the matter of food. The frequent ignorance displayed in its providing and preparation is astonishing. To quote from the *National Hospital Record*: "The first place in which all the best scientific knowledge of food as a remedial agent should be applied is in the hospital kitchen. However fully he may be sustained for a time by the products of the chemist, it is of the utmost importance to the final recovery of the patient that he desire and receive natural food, properly prepared and in sufficient quantity to regain his strength. The neglect of the heart of the whole hospital, the kitchen, is hard to understand, until we realize that this same neglect permeates the community in

regard to individual homes, and that the medical schools treat of food only in relation to disease, and not in relation to healthful living."

Too great importance cannot be attached to an intelligent knowledge of the comparative values of foods, the selection in sickness of the most nutritious, while most easily digested, and, at all times, of the best-known methods in their preparation. Food cooked and served in large quantities, with no discrimination as to character and amount, with little or no desire that it should be palatable, nourishing, and of sufficient variety, is most undoubtedly one great source of waste in our hospitals. It is not always necessary to spend more money for, but to devote more intelligent thought to, this very important department.

The recent introduction in several institutions of women specially trained in dietetics and household economics, and who control and supervise the catering and cooking for the entire household, has already proved most successful. In one large hospital, I am told, the saving in cost of food and other supplies, and the benefits derived generally by the addition to the staff of a graduate in domestic science, has much more than covered the additional outlay in salary. In one of our largest and most progressive schools for nurses the decrease in the cost of food per capita has been five per cent. since the culinary department has been placed under the supervision of skilled teachers and included as a branch of preliminary training for nurses. Very gratifying results have also been shown in the high standard of health among the pupils.

In the serving of food much can be done to prevent unnecessary waste, and here must come the results of preparatory instruction in training-schools. Who should know better the requirements and tastes of the patient than the nurse? Diet is, and always will be, an important part of her duty in private work, and where should the great importance of its proper selection, preparation, and serving be impressed upon her, if not when in training? And yet how difficult it so often is to practise what we preach—to carry out in the daily work of the ward what has been theoretically expounded in the class-room. Many of us must have seen, at some time or other, the least experienced assistant, with, perhaps, a convalescent to help, hurrying through the serving of dinner, that eighteen or twenty trays may be carried in and out in as many minutes. Little or no attention is given to the returned trays, and no note made of untasted food, which the ward maid daily empties into the garbage-pail.

What remedy can be suggested in this matter of waste of food? Better selection and preparation, with some variety; closer supervision in serving, with more time in which to do it, and, lastly, intelligent interest in and knowledge of the patients' needs, while recognizing in

this wilful waste of food a direct abuse of a public charity, as well as an inexcusable ignorance of the wise economic spirit.

How far economy should be practised in the use of linen is always a doubtful question. Even when not absolutely necessary, the frequent changing of sheets and pillow-cases will add greatly to the comfort of a bed patient. There is, however, so much room here for the exercise of common-sense and good judgment, that it would seem better teaching to develop these qualities than to establish rules for daily changes or allowances.

Occasionally one hears of private patients criticising what appears to them needless extravagance in this respect, such as the entire change of bed linen every day of a patient who had undergone a very minor operation and was able to be out of bed, or, in another instance, where even more recklessness was shown, not only in an entire change after the morning bath, but again, incredible as it may appear, when the patient sat out of bed during the afternoon.

Then, again, we find in the misappropriation of articles for other than their legitimate use another source of waste. Dish-towels and tray-napkins found in the garbage-pail testify to their misuse as dusters or floor-cloths, while a systematic inspection of the refuse-cans occasionally reveals great carelessness on someone's part in the discovery there of instruments, spoons, or dishes, and even rubber gloves and towels.

Where gas is used for lighting and heating only continual daily or hourly supervision can control its unnecessary use.

The system of a daily exchange in laundry or linen-room of *soiled* for *clean* dressing-towels, pantry-towels, rollers, and dinner-napkins promotes economy to some extent, as it necessitates closer supervision in the laundry of smaller articles which so mysteriously disappear. In fact, the laundry in some institutions would seem to represent a hidden monster with an insatiable appetite for binders, caps, towels, and even larger articles of every-day requirement, so often do we find the blame placed there for constant reduction in the ward stock of linen.

The washing of new blankets, while not impossible in a hospital laundry, so often proves the reverse of a success that it would seem "penny wise and pound foolish" to expect the best results where the time and intelligence necessary to the proper performance of this task cannot always be given.

When new blankets are returned, shrunken to almost half their size, hard, rough, unpliable, and scarcely fit for further use, the small amount charged by the cleaner, who sends them back practically as good as new, seems, in the end, an outlay giving the best economical results.

An increased expenditure in the drug department has developed with

the more extensive use of expensive proprietary preparations, and a close watch must be kept over prescriptions and requisitions in order that this tendency be kept under control. Much can be saved when supervision is given by someone authorized to refuse the dispensing of costly drugs unless under legitimate conditions.

Many preparations in common use can be made in the drug laboratory at much less cost than they can be bought for; take, for example, a preparation similar to listerine for use as a mouth-wash; this can be made for about eight cents a pint, while the cost of listerine is something like sixty-seven cents. Cleaning and polishing preparations can also be made at a great reduction. The consumption of alcohol, generally speaking, is enormous, and in spite of the fact that used under certain conditions it is tax free, it nevertheless forms an expensive item in hospital outlay. At a public meeting held recently in New York City to consider the present financial crisis in many of the hospitals, it was stated, as the result of investigation and comparison, that in the wards of one of the largest city institutions the quantity of alcohol used varied greatly under different attending physicians.

That equally good results can be obtained with a twenty-five per cent. as with a ninety-five per cent. in the care of patients' backs, and with even less in the sponge-bath as an antipyretic, has been our personal experience. This would indicate a point in economy justly advocated.

In the matter of surgical supplies, all must agree that the possibilities for extravagance are very great and continually on the increase.

A superintendent of large experience recently remarked that "the surgeons are running away with our hospitals;" and, judging from the yearly increasing number of operations, the shorter average number of days' stay in hospital, and the continually increasing demand for supplies in wards and operating-rooms, such might be the case. Much, however, depends on the habits of the individual surgeon, be he a member of the visiting or house staff. Many details could be enumerated, seemingly unimportant, yet collectively illustrating ways of economy or the reverse, well worth consideration. Take, as an instance, the preparation of an operating-room; the number of towels requisite, the gowns, caps, and gloves, the solutions, instruments, ligatures, etc., and the time necessary to observe careful technic. This may all be for one minor operation lasting fifteen or twenty minutes, and not infrequently for *none at all*.

Here economy might often be promoted by deferring other than emergency operations until several could be performed consecutively.

Gallons of salt solution are often used where quarts would answer. Binders, and even sleeves, are cut quite unnecessarily by impatient house doctors, and not infrequently, after cutting off the small portion re-

quired, quite large strips of plain or medicated gauze packing will be discarded and thrown away with soiled dressings.

Details, unimportant, perhaps, but costing time and trouble in their preparation.

It has been demonstrated in private duty, and hospitals as well, that the very best work can be accomplished with few assistants and a small outfit. In one hospital recently excellent results were obtained in two major operations where something less than thirty-six towels were used, while in another one hundred and forty were required to do the same work. The use of rubber gloves for everything under the sun is now, apparently, quite an established custom. In the larger hospitals eighty to ninety pair is not an unusual number for an operating-room stock, while in a surgical ward ten and twelve pair will be used for daily dressings. The repair of these now indispensable articles of operating-room and ward equipment is part of the daily routine and takes much time. Goodyear's rubber cement is used and many and various patches applied.

Adhesive plaster is another commodity requiring close watching, to avoid not only extravagance, but many illegal uses. The most inexcusable misappropriation of this article that ever came to my notice was in seeing the doors of a ward that had been prepared for fumigation closed from floor to ceiling with broad strips of adhesive plaster!

The daily issuing, by requisition, of sterilized gauze and cotton from a general supply-room, with a limit as to amount, does keep a check on extravagance and lessens the chances of waste. Laparotomy dressings, sterilized for final preparations, and which can be used repeatedly; abdominal pads, rinsed, soaked in Labarraque's sol., and boiled, serve their purpose several times; and many yards of gauze can be saved by washing what has been used in the preparation for operations.

One might go on indefinitely in this matter of the use and misuse of hospital material, and many times ask the question, How and where may economy be practised? When should we save, and when best spend? Someone has said that economy is not a natural instinct, but the growth of experience, example, and forethought. If such be the case, much has been left undone in the training of those most directly concerned in hospital work. A knowledge of the underlying principles of true economy is often conspicuously absent, and a sense of responsibility and feeling of proprietorship the exception rather than the rule.

How best may we impart this knowledge, how best inculcate the right spirit? Not by constantly nagging or withholding or refusing necessities as though the request were a personal one and the person

making it guilty of unheard-of extravagance or grave misdemeanor, but by better preparation for the duties and responsibilities of hospital work. And this instruction should be begun the day the pupil enters, given under close supervision and by experienced teachers.

And as we know that in spite of all our efforts there will be people who are careless or extravagant, wasteful or indifferent, once again must eternal vigilance be emphasized as the keynote to a wise and legitimate economy.

ABSTRACT OF DISCUSSION.

This discussion was opened by Mrs. Robb, who said in part: "We all know that the making of a gentleman begins with his grandfather, so the making of a nurse begins with her grandmother; it is not when a woman has attained years of discretion and is prepared to enter a training-school that she should begin to take lessons in economy in household affairs, but when she is a little girl with a careful mother to teach such economy day by day. When we come across such a woman with such a home training, it does not take one month or six months in the hospital to recognize that fact; she shows it immediately in the quality of the work which she gives. One of the defects of our modern world is the lack of such careful home training.

"I have come to the conclusion that we cannot get the best results with our nurses until the mothers who have daughters are aroused to the necessity of giving them more careful and conscientious home training before they have reached young womanhood.

"Not long ago there was an epidemic of typhoid fever in one of our large cities, and the cause was traced to the ice-boxes in the homes of that city. When women do not appreciate their responsibilities and duties in their own small private homes, how are they to be expected to do so when they come into a large institution, where they have not that personal interest for being careful; and how are we, in three short years, to make nurses of them, and to make good, economical housekeepers at the same time?

"I will speak of the linen, although it is only one of many points in Miss Samuel's paper, especially of the number of towels necessary to use for one operation, giving an example from my own experience in what was done during an entire summer in one of the large hospitals in New York many years ago by Dr. Lennig, one of the leading surgeons at that time. When he took the service he outlined what he would require. We had one small room which combined the nurses' room, the linen-closet, the medicine-closet, the ice-box, and the operating-room. He said he must have linen towels for his operations; these the hos-

pital refused to supply. I succeeded, however, in getting three roller-towels, cutting them into three each, which made nine, and the patients hemmed them. Under his instructions they were soaked all night and placed in a solution of bichloride in the morning. He operated six afternoons in the week; he had amputations and all sorts and conditions of operations, and we had only those nine linen towels for the work of the whole summer, washing them out every night, putting them to soak in bichloride, and during the whole summer I did not see one drop of pus.

"If one of the best surgeons in New York could do such work with nine towels, I think thirty-six, suggested by someone as reasonable for an operation, is a very large number."

Miss Maxwell stated that a certain doctor had said to her once that "twelve towels were more than should be used at an operation," and Mrs. Robb said that one hundred and eighty was not an unusual number to be prepared.

Miss Walker said: "A little while ago I was present when some criticism was made in regard to the character of a nurse, and the reply was that in 'three years we can teach nursing, but we cannot make over character; the previous twenty-one, twenty-two, or twenty-three years must count for something.' Our mothers taught us what might be called common honesty; there is, perhaps, no worker in a hospital who could not be confidently trusted with untold wealth and be true to the trust, but our mothers, perhaps, have not foreseen that we might be entrusted with spending money that was given for charity and which, I think, requires uncommon honesty. Is there any worker in a hospital who has not at some time been guilty of some slight abuse of the trust imposed in her? After all, hospital economy is but another word for honesty: the nurse upon first entering a training-school must have this because in entering the wards she sees all around her unlimited supplies for the use of the patients, and if in the ethical talks that are given her this question is not emphasized, she very likely falls into the habit of using too freely what she ought to use with the greatest discretion.

"In my experience there are two classes of workers: those who are strictly conscientious in handling other people's property, and those who have been trained to careful economy in managing their own affairs, but who are not equally careful in their use of hospital materials which have been bought with money provided for the use of the sick. I consider that this matter of hospital economy is a question of ethics."

Miss Giles said it had been her experience that the education in hospital economy should begin with the physician as well as the nurse, saying that she had much trouble with physicians in regard to extrava-

gance, and while the nurses had such examples before them it was exceedingly difficult to make them careful.

Miss Nevins thought that, while Miss Giles was right in the main, there were notable exceptions.

Miss Maxwell thought the lack of economy in food and supplies was due mainly to the members of the house staff—the young men who really give the orders, but in most instances know nothing of the cost of the materials.

Miss Davis thought that both the hospital managers and the nurses were powerless when the members of the medical staff insisted upon a policy of extravagance. While there were notable instances here and there of nurses being at fault, it did not rest with the nurses whether the hospital was run extravagantly or not.

It was the consensus of opinion of a number of speakers that while nurses were undoubtedly wasteful in small ways the fault was largely one of extravagance in construction of buildings without due regard to convenience of administration, undue outlay in costly equipment, unreasonable demands for service, extravagance in the use of supplies of all kinds, all of these conditions being the result of the requirements of the medical staff.

[We regret that Miss Alline's paper, "Training-School Libraries, Scholarships, Loan Funds, and Tuition Fees," is not ready for publication, but it will appear in a later number.—Ed.]

THE INTRODUCTION OF SALARIED INSTRUCTION IN THE TRAINING-SCHOOLS

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PHENOMENAL numerical increase would be a brief but comprehensive summary of the statistics concerning the schools of nursing issued by the Board of Education during the last twenty years. In 1882, 16 schools; in 1892, 45; in 1902 (the last report published), 545 (this includes 50 schools of nursing connected with insane hospitals), the total number of other schools being 472, and an increase over the preceding year of 100.

Convincing as these statistics are of the need of the public for such schools, it is due not only to the public but to ourselves, in whose hands these schools have been placed, to give statistical evidence of a greater progress than mere growth in numbers represents. The compilation of